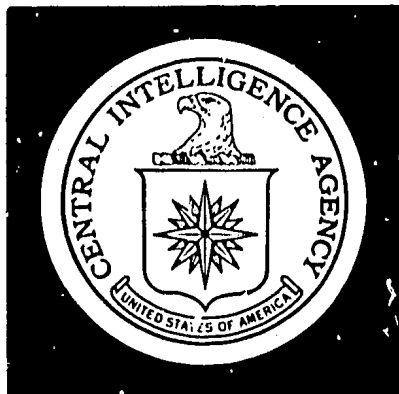


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**DIRECTORATE OF
INTELLIGENCE**

Intelligence Memorandum

A New Look At Soviet Coal Production

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CENTRAL INTELLIGENCE AGENCY

Directorate of Intelligence

April 1971

INTELLIGENCE MEMORANDUM

A NEW LOOK AT SOVIET COAL PRODUCTION

1. A recent book* indicates that the Soviet coal production is not as large as was previously believed. This source discloses that the statistics customarily published by the USSR have referred to gross output of coal. Gross coal output includes waste material subsequently rejected in cleaning and preparation processes and, therefore, overstates the quantity of coal actually available for use.** Although it was known, prior to receipt of the new book, that the Soviet statistics did not present net output data, lack of information precluded estimating the losses resulting from cleaning.

2. In the past, when very little Soviet coal was mechanically cleaned, the difference between raw gross and net available after processing was unimportant. Not all Soviet coal is mechanically cleaned even now, but with time an increasing share is being cleaned in this manner. In 1950, only about 17% of the gross was mechanically cleaned; by 1969 this had increased to 45%. Concurrently, the losses resulting from cleaning have increased from about 10% of the raw coal processed in 1950 to more than 16% in 1969. Cleaning losses amounted to about 7.3% of gross output in 1969, or 44.3 million tons.***

3. Stated another way, Soviet miners extracted 607.8 million tons of raw coal in 1969, but of that amount only 563.5 million tons were actually available for distribution to the national economy. The outlook

* *Statisticheskii yezhegodnik stran-chlenov soveta ekonomicheskoy vzaimopomoshchi 1970 (Statistical Yearbook of Member Countries of CEMA 1970).*

** *Excluding additions to or withdrawals from stocks and net foreign trade.*

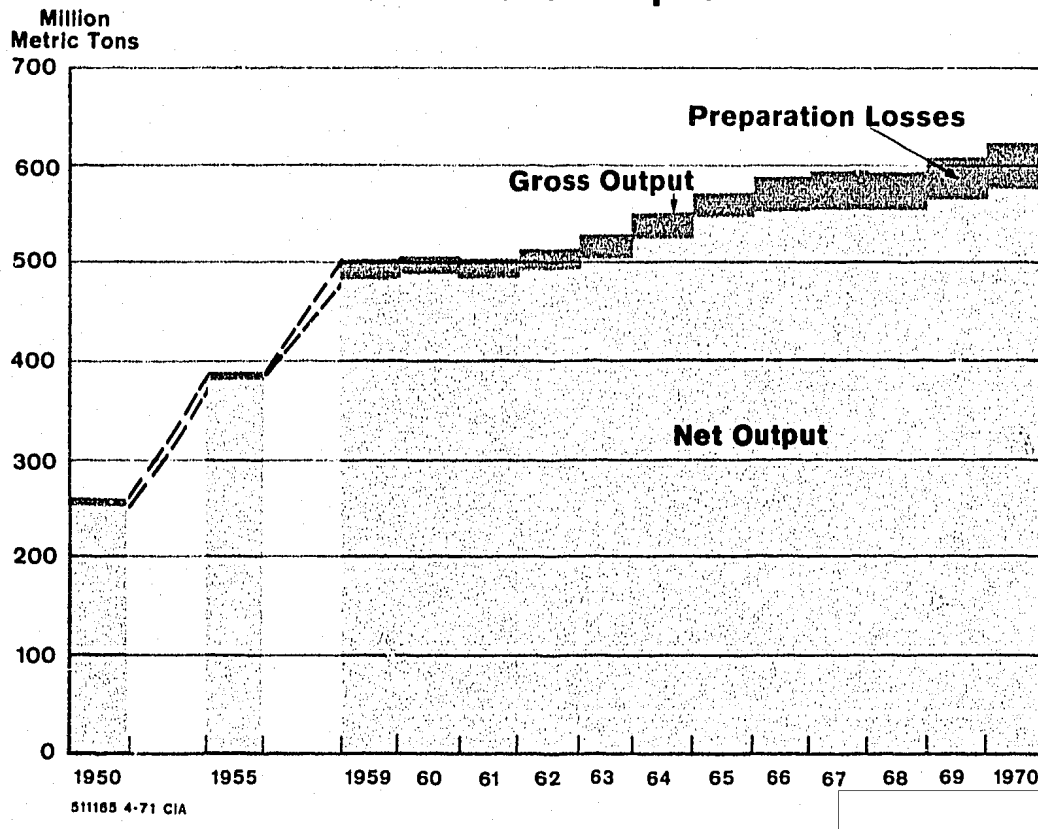
*** *Metric tons are used throughout this memorandum.*

Note: This memorandum was prepared by the Office of Economic Research.

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for the future is that the gap between gross and net output will continue to widen as more and more of the raw output is mechanically cleaned and a growing share of the coal processed ends up on waste dumps. The chart shows graphically the gross and net outputs of coal in the USSR for selected years. Table I lists Soviet coal output for the years in which data for both gross and net output are available.

Soviet Coal Output

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4. International comparisons of the Soviet coal industry may be misleading, if, as frequently happens, Soviet gross output is collated with the net output of other countries.* One question is, "Who is the world's

* *Practically all other coal-producing nations report their output on a net basis. The disclosure by the Soviets of their net output figures may be the result of an attempt by the UN and CEMA to attain better comparability in statistical presentations.*

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leading producer of coal?" On a gross output basis the USSR assumed world leadership in 1958 and held it through 1965. The United States surpassed the USSR in gross output in 1966 and has retained leadership since that year. In terms of tons of coal available for consumption and export, however, the USSR has remained in first place since 1958. Nevertheless, Soviet net output is still not strictly comparable to that of the United States, because tonnage data do not take into consideration quality differences such as the composition of output by type of coal, calorific value, moisture content, and ash content. On the basis of the calorific value alone, it took almost 1.4 tons of Soviet net output in 1969 to supply the same amount of energy as 1 ton of US coal. US net output in 1969 was practically all anthracite and bituminous coal -- less than 1% low-quality lignite. In contrast, more than 24% of the Soviet net output in 1969 was low-quality brown coal. Table 2 shows salient statistics for the US and Soviet coal industries for selected years in the period 1950-70.

5. Moreover, the use of the trend of gross output in economic studies of the USSR raises some questions. Gross output of coal in the USSR in 1970 was 139% greater than in 1950; on a net output basis, however, the corresponding increase was only about 125%. Likewise, on a gross basis, Soviet coal output grew by 8% in the Eighth Five-Year Plan (1966-70), but on a net basis the gain was only about 6%. Which of these trends properly reflects the growth of coal output is unclear. The cleaning of coal *per se* improves its quality. However, there is some evidence to suggest that increased cleaning of coal in the USSR is only offsetting an increase in waste material, leaving the average quality of hard coal approximately the same. The Ninth Five-Year Plan (1971-75) calls for a gross output of 685-695 million tons in 1975 -- an increase of about 10% to almost 11-1/2% over that of 1970. The planned net output for 1975 is not known, but a conservative conjecture is that 10% of gross output may be lost in cleaning. Thus, on a net basis the increase proposed in the Five-Year Plan is a more modest 6-1/2% to 8%, or only about two-thirds of the envisioned gain in gross output.

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Table 1
Annual Soviet Coal Output

<u>Year</u>	<u>Million Metric Tons</u>		Percent of Gross Lost in Cleaning
	<u>Raw Gross Output</u>	<u>Net Available After Cleaning</u>	
1950	261.1	256.8	1.6
1953	N.A.	313.1	N.A.
1955	389.9	380.2	2.5
1959	503.3	486.5	3.3
1960	509.6	490.1	3.8
1961	506.4	484.5	4.3
1962	517.4	493.6	4.6
1963	531.7	505.0	5.0
1964	554.0	524.2	5.4
1965	577.7	545.1	5.6
1966	585.6	550.8	5.9
1967	595.2	555.6	6.7
1968	594.2	552.3	7.1
1969	607.8	563.5	7.3
1970 <u>a/</u>	624.0	578.5 <u>b/</u>	7.3 <u>b/</u>

a. Preliminary.

b. Estimated.

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Table 2
Production and Preparation of Coal, US and USSR, Selected Years
1950-70

Year	Gross Raw Output (Million Metric Tons)		Raw Coal Cleaned (Percent of Gross Output)		Clean Coal as a Percent of Raw Coal Cleaned		Percent Refuse of				Net Output			
	US	USSR	US	USSR	US	USSR	Raw Coal Cleaned	Gross Output	US	USSR	US	USSR	US	USSR
1950	563.9	261.1	48.9	16.7	79.9	90.1	20.1	9.9	9.8	1.6	508.4	256.8	90.2	98.4
1955	515.4	389.9	66.2	26.0	79.5	90.4	20.5	9.6	13.6	2.5	445.3	380.2	86.4	97.5
1957	550.4	461.0	68.9	28.5	78.8	N.A.	21.2	8.4	14.6	2.4	470.0	450.0	a/	97.6
1958	458.8	493.2	70.0	27.6	79.1	N.A.	20.9	9.8	14.6	2.7	391.6	480.0	a/	97.3
1960	464.2	509.6	72.0	29.8	79.0	87.2	21.0	12.8	15.1	3.8	394.0	490.1	84.9	96.2
1965	565.0	577.7	71.3	37.2	78.2	84.8	21.8	15.2	15.5	5.6	477.3	545.1	84.5	94.4
1966	589.3	585.6	70.4	38.2	77.3	84.4	22.7	15.6	16.0	5.9	495.3	550.8	84.0	94.1
1967	610.3	595.2	69.9	41.3	76.9	83.8	23.1	16.2	16.1	6.7	511.8	555.6	83.9	93.3
1968	601.4	594.2	69.3	43.8	76.7	83.9	23.3	16.1	16.1	7.1	504.4	552.3	83.9	92.9
1969	617.2	607.8	66.8	44.6	75.9	83.6	24.1	16.4	16.1	7.3	518.0	563.5	83.9	92.7
1970 b/	649.0	624.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	16.2	7.3	543.8	578.5	83.8	92.7

a. Estimated.

b. Preliminary estimate.

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